



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

MAY 31 2019

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (7014 0150 0000 2405 1503)

Mr. Brad Widener
Director of Operations
Lone Star NGL Fractionators, LLC
Fractionators, I, II, & III
12353 Eagle Pointe Drive
P.O. Box 250
Mont Belvieu, TX 77580

Re: NPDES Application No. TX0140082 – Lone Star NGL Fractionators, LLC

Dear Mr. Widener:

Your National Pollution Discharge Elimination System (NPDES) permit is enclosed. The draft permit which we previously sent you received no comments. The effective date and the expiration date of this final permit appears on the cover page.

Should you have any questions concerning the compliance with this permit, please feel free to contact the Enforcement Branch at the above address or telephone (214) 665-6450; if however, you should have questions with regards to the issuance of this permit, please contact the Permits Branch at the above address or telephone (214) 665-7170.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Charles W. Maguire", is written over the typed name and title.

Charles W. Maguire
Director
Water Division

Enclosure

cc: Texas Railroad Commission



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No TX0140082

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Lone Star NGL Fractionators, LLC
Fractionators I, II, & III
Mont Belvieu L.P. Fractionator
P.O. Box 250
Mont Belvieu, Texas 77580

is authorized to discharge from a facility located at 9850 FM 1942, Baytown, Chambers County, Texas,

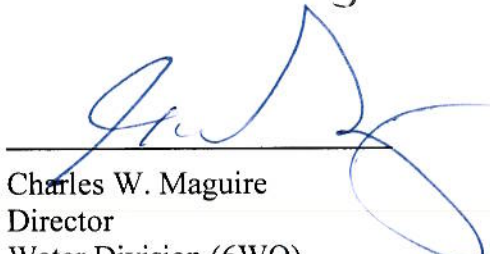
from Outfall 001: Latitude 29° 50' 57.33"N; Longitude 94° 54' 38.81"W and Outfall 002: Latitude 29° 51' 0.33"N; Longitude 94° 54' 41.98"W, both of which discharge to a ditch into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin.

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II and Part III hereof.

This is a revoke and reissue, prepared by Maria Okpala, Environmental Engineer, Permitting Section (6WQ-PP), and shall become effective on *June 1, 2019*

This permit and the authorization to discharge shall expire at midnight, *May 31, 2024*

Issued on **MAY 31 2019**


Charles W. Maguire
Director
Water Division (6WQ)

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. Interim Effluent Limits for Outfalls 001 and 002 – Stormwater and Wet Surface Air Cooler Blowdown– 0.432 MGD Flow

During the period beginning on the effective date of the permit and lasting 36 months from permit effective date, the permittee is authorized to discharge RO reject water, stormwater and surface air cooler blow down from Outfalls 001 and 002, thence to a ditch into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.5	9.0	Twice/month (*1)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	STORET CODE	MON AVG	DAY MAX	mg/l, unless noted	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	N/A	Daily	Record
Biochemical Oxygen Demand (BOD ₅)	00310	72.06	108.09	20	Twice/month (*1)	Grab
Zinc	01092	Report	Report	Report	Twice/month (*1)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-Day AVG MINIMUM	7-Day MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY (7day, Static Renewal) (*2)	Report	Report	Once/Quarter	24-Hr Composite
Menidia beryllina	Report	Report	Once/Quarter	24-Hr Composite
Mysidopsis bahia	Report	Report	Once/Quarter	24-Hr Composite

2. Final Effluent Limits for Outfalls 001 and 002 – Stormwater and Wet Surface Air Cooler Blowdown– 0.432 MGD Flow

During the period beginning 36 months from the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge RO reject water, stormwater and surface air cooler blow down from Outfalls 001 and 002, thence to a ditch into unnamed tributary of Cedar Bayou Tidal in Waterbody Segment Code No. 0901 of the Trinity – San Jacinto Coastal Basin. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	STORET CODE	Standard Units	MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT		MINIMUM	MAXIMUM	
pH	00400	6.5	9.0	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	STORET CODE	lbs/day, unless noted	DAY MAX	MON AVG	DAY MAX	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	N/A	N/A	Record
Biochemical Oxygen Demand (BOD ₅)	00310	72.06	108.09	20	30	Grab
Zinc	01092	0.450	0.951	0.125	0.264	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-Day AVG MINIMUM	7-Day MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY (7day, Static Renewal) (*2)	Report	Report	Once/Quarter	24-Hr Composite
Menidia beryllina	Report	Report	Once/Quarter	24-Hr Composite
Mysidopsis bahia	Report	Report	Once/Quarter	24-Hr Composite

Footnotes:

- *1 For any monitoring period, samples shall be taken at least seven (7) days from the first sample of the previous monitoring period.
 *2 Monitoring and reporting requirements begin on the effective date of this permit. Compliance with the Whole Effluent Toxicity limitations is required three years from the permit effective date. See PART I, Compliance Schedules, and Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

SAMPLING LOCATION(S) AND OTHER REQUIREMENTS

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream from the following approximate location:

Outfall 001: Latitude 29° 50' 57"N; Longitude 94° 54' 38"W

Outfall 002: Latitude 29° 51' 0"N; Longitude 94° 54' 41"W

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall comply with the following schedule of activities for the attainment of state water quality standards-based final effluent limitations for **total Zinc**

- a. Determine exceedance cause(s);
- b. Develop control options, if needed;
- c. Evaluate and select control mechanisms;
- d. Implement corrective action; and
- e. Attain final effluent limitations for **Total zinc** no later than 36 months respectively from the permit effective date.

The permittee shall submit quarterly progress reports, to both EPA and Texas Railroad Commission, in accordance with the following schedule. The requirement to submit quarterly progress reports for **Total Zinc** shall expire 36 months respectively from the permit effective date. No later than 14-days after the date compliance with the **Total Zinc** final limits have been met, the permittee shall submit a written final report both to EPA and the State Agency, stating that compliance has been completed. If at any time during the compliance periods the permittee determines that full compliance will not be met within the time allowed, a separate report shall be sent to both EPA and the State Agency stating the explanation for this delay and proposed remedial actions.

PROGRESS REPORT DATES

January 30

April 30

July 30

October 30

The permittee should note that each date applies to the prior three-month period.

Send progress and final reports to the following addresses:

EPA:
Compliance Assurance and
Enforcement Division
Water Enforcement Branch (6EN-W)
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Texas Railroad Commission:
Railroad Commission of Texas
Oil & Gas Division
ATTN: Program Manager
1701 North Congress Avenue
Environmental Services Section
P.O. Box 12967
Austin, TX 78711- 12967

SECTION C. MONITORING AND REPORTING (MINOR DISCHARGERS)

1. Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required. (See Part III.D.IV of the permit.)

Discharge Monitoring Report Form(s) shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

2. Reporting periods shall end on the last day of the months March, June, September, and December.

3. The first Discharge Monitoring Report(s) shall represent facility operations from the effective date of the permit through the last day of the current reporting period.

4. Thereafter, the permittee is required to submit regular quarterly reports as described above and shall submit those reports postmarked no later than the 28th day of the month following each reporting period.

5. NO DISCHARGE REPORTING - If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

6. If any daily maximum or monthly average value exceeds the effluent limitations specified in Part I. A, the permittee shall report the excursion in accordance with the requirements of Part III. D.

7. Any daily maximum or monthly average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I. A shall constitute evidence of violation of such effluent limitation and of this permit.

8. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.

9. All reports shall be sent both to EPA and the Texas Railroad Commission at the addresses shown in Part III of the permit.

C. WATER TREATMENT CHEMICAL PROHIBITION

Products containing chromium and zinc will be prohibited from use as additives to the utility waters.

PART II - OTHER REQUIREMENTS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

The Permittees shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the minimum quantification levels (MQLs) are not sufficiently sensitive to the limits, the actual detected values, instead of zeros, need to be reported. If there is a sensitive method with MDL (method detection limit) below the limit, but the MQL is above the limit, they cannot report zero based on MQL, but must report actual value.

If any individual analytical test result is less than the MQL listed in Appendix A, or the more sensitive MDL, a value of zero (0) may be used for that individual result for reporting purpose.

The Permittees may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR 136. For any pollutant for which the Permittees determine an effluent specific MDL, the Permittees shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit, then the method that has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample-specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample-specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit.

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, at (214) 665-6595, and concurrently to Railroad Commission of Texas, at (512) 463-6804, within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

Zinc

C. 40 CFR PART 136 ANALYTICAL REQUIREMENTS

Unless otherwise specified in this permit, monitoring shall be conducted according to the analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 CFR Part 136 are specifically referenced as part of this requirement. Amendments to 40 CFR Part 136 promulgated after the effective date of this permit shall supersede these requirements as applicable.

D. REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the Texas Commission on Environmental Quality (TCEQ) Water Quality Standards for Interstate and Intrastate Streams are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the TCEQ. Should the State adopt a State water quality standard, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard in accordance with 40CFR122.44 (d). Modification of the permit is subject to the provisions of 40CFR124.5.

If a new or revised TMDL is determined for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit. Additionally, in accordance with 40 CFR Part 122.62 (a) (2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

E. STORM WATER POLLUTION PREVENTION

Stormwater has been identified by the applicant/permittee as a component of the discharge through Outfalls 001 and 002. This section applies to all stormwater discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit. The language below has been included in this permit to control stormwater through discharges in individual permits:

1. The permittee shall prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. The terms and conditions of the SWP3 shall be an enforceable Part of the permit.
2. A visual inspection of the facility shall be conducted and a report made annually as described in Paragraphs E.2.d and E.2.e below. The annual report shall be retained on site and available upon request.

The following conditions shall be included in the SWP3 for this facility.

- a. The permittee shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the facility; describe and ensure implementation of practices which will be used to reduce pollutants in storm water discharges from the facility; and assure compliance with the terms and conditions of this permit.
- b. The permittee must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s). The permittee must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

- c. Where experience indicates a reasonable potential for equipment failure (e.g. a tank overflow or leakage), natural conditions e.g. precipitation, or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- d. The permittee shall maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the SWP3 and the permit, and identifying any incidents of noncompliance. The summary report should contain, at a minimum, the date and time of inspection, name of inspectors(s), conditions found, and changes to be made to the SWP3.
- e. The summary report and the following certification shall be signed and attached to the SWP3 and provided to the Environmental Protection Agency and the Railroad Commission of Texas upon request.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signatory requirements for the certification may be found in Part III, Section D.11 of this permit.

f. The permittee shall make available to the Agency, the Railroad Commission of Texas, and/or the USFWS, upon request, a copy of the SWP3 and any supporting documentation.

3. The following shall be included in the SWP3, if applicable.

a. The permittee shall utilize all reasonable methods to minimize any adverse impact on the drainage system including but not limited to:

- i. maintaining adequate road and driveway surfaces;
- ii. removing debris and accumulated solids from the drainage system; and
- iii. cleaning up prior to the next storm event, any spill by sweeping, absorbent pads, or other appropriate methods.

b. All spilled product and other spilled wastes shall be immediately cleaned up and disposed of according to all applicable regulations, Spill Prevention and Control (SPC) plans or Spill Prevention Control and Countermeasures (SPCC) plans. Use of detergents, emulsifiers, or dispersants to clean up spilled product is prohibited except where necessary to comply with State or Federal safety regulations (i.e., requirement for non-slippery work surface). In all such cases, initial cleanup shall be done by physical removal and chemical usage shall be minimized.

c. All equipment, parts, dumpsters, trash bins, petroleum products, chemical solvents, detergents, or other materials exposed to stormwater shall be maintained in a manner which prevents contamination of stormwater by pollutants.

d. All waste fuel, lubricants, coolants, solvents, or other fluids used in repair or maintenance of vehicles or equipments shall be recycled or contained for proper disposal. Spills of these materials are to be cleaned up by dry means whenever possible.

e. Stormwater Pollution Prevention Plan must be consistent with the requirements of the current Oil Pollution Prevention regulations.

- f. Prior to discharge of uncontaminated stormwater from a secondary containment area, the permittee will conduct a visual inspection of the containment area for a visible sheen, an odor associated within the tanked products, and/or a stain pattern within the contained area that is indicative of a spill or leak into that area. No dewatering of the area is allowed under the condition of this permit, if evidence exists of a spill or leak, unless the discharge will not exceed 50 mg/l TOC, 15 mg/l Oil and Grease, or having a pH less than 6.0 or greater than 9.0 standard units.
- g. The permittee shall assure compliance with all applicable regulations promulgated under 40 CFR Part 257. Management practices required under regulations found in this Part shall be referenced in the SWP3.
- h. The permittee shall amend the SWP3 whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.
- i. If the SWP3 proves to be ineffective in achieving the general objectives preventing the release of significant amounts of pollutants to water of the state, then the specific objectives and requirements of the SWP3 shall be subject to modification to incorporate revised SWP3 requirements.
4. The facility shall maintain SWP3 describing how the above limits will be met.

F. WHOLE EFFLUENT TOXICITY TESTING (7-DAY CHRONIC NOEC MARINE)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001 & 002
REPORTED ON DMR AS FINAL OUTFALL:	001 & 002
CRITICAL DILUTION (%):	12.91%
EFFLUENT DILUTION SERIES (%):	5.45%, 7.26%, 9.68%, 12.91%, and 17.21%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Mysidopsis bahia (Mysid shrimp) chronic static renewal 7-day survival and growth test using Method 1007.0, EPA-821-R-02-014, or the most recent update thereof.

Menidia beryllina (Inland Silverside minnow) chronic static renewal 7-day larval survival and growth test, Method 1006.0, EPA-821-R-02-014, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHAL and/or SUB LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

If any valid test demonstrates significant lethal or sublethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit.

a. Part I Testing Frequency Other Than Monthly

- i. The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant toxic effects at or below the critical dilution. The additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
- ii. IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section.

The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

- iii. IF ONLY SUB-LETHAL EFFECTS HAVE BEEN DEMONSTRATED
If any two of the three additional tests demonstrate significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required for failure to perform the required retests.
- iv. The provisions of Item 2.a.i. are suspended upon submittal of the TRE Action Plan.

b. Part I Testing Frequency of Monthly

The permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section when any two of three consecutive monthly toxicity tests exhibit significant lethal effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal and/or sub-lethal effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean dry weight of surviving Mysid shrimp at the end of the 7 days in the control (0% effluent) must be 0.20 mg per mysid or greater. Should the mean dry weight in the control be less than 0.20 mg per mysid, the toxicity test, including the control and all effluent dilutions shall be repeated.
- iii. The mean dry weight of surviving unpreserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.50 mg per larva or greater. The mean dry weight of surviving preserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.43 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.

- v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.
- vi. A Percent Minimum Significant Difference (PMSD) range of 11 - 37 for *Mysidopsis bahia* growth;
- vii. A PMSD range of 11 - 28 for Silverside minnow growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Mysid shrimp and the Inland Silverside minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-014 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and salinity to the closest downstream perennial water for;
 - (A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - (B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

- (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
- (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
- (D) the synthetic dilution water shall have a pH, hardness, and salinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- i. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iii. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.
- v. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-014, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.
 - i. Menidia beryllina (Inland Silverside minnow)
 - A. If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP6B
 - B. Report the NOEC value for survival, Parameter No. TOP6B
 - C. Report the Lowest Observed Effect Concentration (LOEC) value for survival, Parameter No. TXP6B
 - D. Report the NOEC value for growth, Parameter No. TPP6B
 - E. Report the LOEC value for growth, Parameter No. TYP6B
 - F. If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6B
 - G. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6B
 - ii. Mysidopsis bahia (Mysid shrimp)
 - A. If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP3E

- B. Report the NOEC value for survival, Parameter No. TOP3E
 - C. Report the LOEC value for survival, Parameter No. TXP3E
 - D. Report the NOEC value for growth, Parameter No. TPP3E
 - E. Report the LOEC value for growth, Parameter No. TYP3E
 - F. If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3E
 - G. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP3E
- d. Enter the following codes on the DMR for retests only:
- i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a "0."
 - iii. For retest number 3, Parameter 51443, enter a '1' if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a '0'

5. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE_L) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of less than 76% effluent.

- a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical

dilution and include the following:

- i. **Specific Activities.** The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information
Service 5285 Port Royal Road
Springfield, VA 22161

- ii. **Sampling Plan** (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

- iii. **Quality Assurance Plan** (e.g., QA/QC implementation, corrective actions, etc.); and
 - iv. **Project Organization** (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

- c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
- i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - iii. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Inland Silverside minnow) and not less than twice per year for the more sensitive test species (usually the mysid shrimp).
- b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition, the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.

- c. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the survival or sub-lethal endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

Any monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

PART III - STANDARD CONDITIONS FOR NPDES PERMITS**A. GENERAL CONDITIONS****1. INTRODUCTION**

In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.

2. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. TOXIC POLLUTANTS

a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.

5. PERMIT FLEXIBILITY

This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

7. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. CRIMINAL AND CIVIL LIABILITY

Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

9. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

10. STATE LAWS

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

11. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

B. PROPER OPERATION AND MAINTENANCE**1. NEED TO HALT OR REDUCE NOT A DEFENSE**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

2. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. PROPER OPERATION AND MAINTENANCE

- a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.
- b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. BYPASS OF TREATMENT FACILITIES**a. BYPASS NOT EXCEEDING LIMITATIONS**

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.b. and 4.c.

b. NOTICE**(1) ANTICIPATED BYPASS**

If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) UNANTICIPATED BYPASS

The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.D.7.

c. PROHIBITION OF BYPASS

(1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

(c) The permittee submitted notices as required by Part III.B.4.b.

(2) The Director may allow an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.B.4.c(1).

5. UPSET CONDITIONS

a. EFFECT OF AN UPSET

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.B.5.b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. CONDITIONS NECESSARY FOR A DEMONSTRATION OF UPSET

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the upset as required by Part III.D.7; and,
- (4) The permittee complied with any remedial measures required by Part III.B.2.

c. BURDEN OF PROOF

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. REMOVED SUBSTANCES

Unless otherwise authorized, solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. PERCENT REMOVAL (PUBLICLY OWNED TREATMENT WORKS)

For publicly owned treatment works, the 30-day average (or Monthly Average) percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.103.

C. MONITORING AND RECORDS

1. INSPECTION AND ENTRY

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. REPRESENTATIVE SAMPLING

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. RETENTION OF RECORDS

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. RECORD CONTENTS

Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements;

- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) and time(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

5. MONITORING PROCEDURES

- a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
- b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.
- c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6. FLOW MEASUREMENTS

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

D. REPORTING REQUIREMENTS

1. PLANNED CHANGES

a. INDUSTRIAL PERMITS

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,
- (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements listed at Part III.D.10.a.

b. MUNICIPAL PERMITS

Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. ANTICIPATED NONCOMPLIANCE

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. TRANSFERS

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. DISCHARGE MONITORING REPORTS AND OTHER REPORTS

Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at <https://netdmr.epa.gov>. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water

Enforcement Branch, Texas State Coordinator (6EN-WC), (214) 665-6468. If paper reporting is granted temporarily, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA at the address below. Duplicate copies of DMR's and all other reports shall be submitted to the appropriate State agency(ies) at the following address(es):

EPA:

Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Texas:

Program Manager
Environmental Services
Railroad Commission of Texas
1701 North Congress Avenue
P.O. Box 12967
Austin, Texas 78711-2967

5. ADDITIONAL MONITORING BY THE PERMITTEE

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

6. AVERAGING OF MEASUREMENTS

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. TWENTY-FOUR HOUR REPORTING

a. The permittee shall report any noncompliance which may endanger health or the environment. Notification shall be made to the EPA at the following e-mail address: R6_NPDES_Reporting@epa.gov, as soon as possible, but within 24 hours from the time the permittee becomes aware of the circumstance. Oral notification shall also be to the New Mexico Environment Department at (505) 827-0187 as soon as possible, but within 24 hours from the time the permittee becomes aware of the circumstance. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

- (1) A description of the noncompliance and its cause;
- (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,
- (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. The following shall be included as information which must be reported within 24 hours:

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
- (2) Any upset which exceeds any effluent limitation in the permit; and,
- (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

8. OTHER NONCOMPLIANCE

The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B (for industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7.

9. OTHER INFORMATION

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

10. CHANGES IN DISCHARGES OF TOXIC SUBSTANCES

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Director as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2, 4-dinitro-phenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - (4) The level established by the Director.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
 - (4) The level established by the Director.

11. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Director shall be signed and certified.

- a. ALL PERMIT APPLICATIONS shall be signed as follows:

- (1) FOR A CORPORATION - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,
 - (b) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- (2) FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP - by a general partner or the proprietor, respectively.
- (3) FOR A MUNICIPALITY, STATE, FEDERAL, OR OTHER PUBLIC AGENCY - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

- b. ALL REPORTS required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above;
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental

matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

(3) The written authorization is submitted to the Director.

c. CERTIFICATION

Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations"

12. AVAILABILITY OF REPORTS

Except for applications, effluent data permits, and other data specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

1. CRIMINAL

a. NEGLIGENT VIOLATIONS

The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

b. KNOWING VIOLATIONS

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.

c. KNOWING ENDANGERMENT

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

d. FALSE STATEMENTS

The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. CIVIL PENALTIES

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$37,500 per day for each violation.

3. ADMINISTRATIVE PENALTIES

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. CLASS I PENALTY

Not to exceed \$16,000 per violation nor shall the maximum amount exceed \$37,500.

b. CLASS II PENALTY

Not to exceed \$16,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$177,500.

F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. ACT means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.
2. ADMINISTRATOR means the Administrator of the U.S. Environmental Protection Agency.
3. APPLICABLE EFFLUENT STANDARDS AND LIMITATIONS means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. APPLICABLE WATER QUALITY STANDARDS means all water quality standards to which a discharge is subject under the Act.
5. BYPASS means the intentional diversion of waste streams from any portion of a treatment facility.
6. DAILY DISCHARGE means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.
7. DAILY MAXIMUM discharge limitation means the highest allowable "daily discharge" during the calendar month.
8. DIRECTOR means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.
9. ENVIRONMENTAL PROTECTION AGENCY means the U.S. Environmental Protection Agency.
10. GRAB SAMPLE means an individual sample collected in less than 15 minutes.
11. INDUSTRIAL USER means a non-domestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.
12. MONTHLY AVERAGE (also known as DAILY AVERAGE) discharge limitations means the highest allowable average of "daily discharge(s)" over a calendar month, calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month. When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily concentration, F = daily flow, and n = number of daily samples; daily average discharge =

$$\frac{C_1F_1 + C_2F_2 + \dots + C_nF_n}{F_1 + F_2 + \dots + F_n}$$
13. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Act.

14. SEVERE PROPERTY DAMAGE means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. SEWAGE SLUDGE means the solids, residues, and precipitates separated from or created in sewage by the unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly owned treatment works.
16. TREATMENT WORKS means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof.
17. UPSET means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
18. FOR FECAL COLIFORM BACTERIA, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.
19. The term "MGD" shall mean million gallons per day.
20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).
21. The term "µg/L" shall mean micrograms per liter or parts per billion (ppb).
22. MUNICIPAL TERMS
 - a. 7-DAY AVERAGE or WEEKLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - b. 30-DAY AVERAGE or MONTHLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
 - c. 24-HOUR COMPOSITE SAMPLE consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
 - d. 12-HOUR COMPOSITE SAMPLE consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
 - e. 6-HOUR COMPOSITE SAMPLE consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
 - f. 3-HOUR COMPOSITE SAMPLE consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

TEXTOX MENU #9 - INTERMITTENT FRESHWATER STREAM WITHIN 3 MILES OF A NARROW TIDAL RIVER

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater and Saltwater Aquatic Life
 Table 2, 2018 Texas Surface Water Quality Standards for Human Health
 "Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name: LONE STAR NGL FRACTIONATOR I, II, & III
 TPDES Permit No: TX0140082
 Outfall No: 001 & 002
 Prepared by: Maria Okpala
 Date: 2/5/2019

DISCHARGE INFORMATION

Intermittent Receiving Waterbody: Cedar Bayou above Tidal
 Segment No. for Freshwater Ambient Data: 902
 TSS (mg/L) (Intermittent): 3
 pH (Standard Units) (Intermittent): 7.1
 Hardness (mg/L as CaCO₃) (Intermittent): 40
 Chloride (mg/L) (Intermittent): 83
 Effluent Flow for Aquatic Life (MGD): 0.432
 % Effluent for Aquatic Life (Intermittent): 100
 Saltwater Receiving Waterbody: Cedar Bayou Tidal
 Segment No.: 901
 TSS (mg/L) (Narrow Tidal River): 18
 Critical Low Flow [7Q2] (cfs): 4.51
 % Effluent for Chronic Aquatic Life (Narrow Tidal River): 12.907
 % Effluent for Acute Aquatic Life (Narrow Tidal River): 37.218
 Effluent Flow for Human Health (MGD): 0.432
 Harmonic Mean Flow (cfs): 14.66
 % Effluent for Human Health (Narrow Tidal River): 4.361

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Stream/River Metal	Intercept (b)	Slope (m)	Partition Coefficient (kp)	Dissolved Fraction (cd/ct)	Source	Water Effect Ratio (WER)	Source
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	214635.47	0.608	Assumed	1.00	Assumed
Cadmium	6.60	-1.13	1150410.88	0.225	Assumed	1.00	Assumed
Chromium (total)	6.52	-0.93	1192002.68	0.219	Assumed	1.00	Assumed
Chromium (trivalent)	6.52	-0.93	1192002.68	0.219	Assumed	1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	464440.70	0.418	Assumed	1.00	Assumed
Lead	6.45	-0.80	1170315.61	0.222	Assumed	1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	261842.95	0.560	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	773686.66	0.301	Assumed	1.00	Assumed
Zinc	6.10	-0.70	583465.42	0.364	Assumed	1.00	Assumed

Nonylphenol	28	7	1.7	28	18.8	13.2	16.0	10.8	10.1	14.9	31.5
Parathion (ethyl)	0.065	N/A	N/A	0.065	N/A	N/A	0.037	N/A	N/A	0.055	0.116
Pentachlorophenol	9.6	15.1	9.6	9.6	40.6	74	5.5	23.2	57.3	8.1	17.2
Phenanthrene	30	7.7	4.6	30	20.7	35.6	17.2	11.9	27.4	17.4	36.9
Polychlorinated Biphenyls [PCBs]	2.0	10	0.03	2.0	26.9	0.232	1.146	15.4	0.179	0.263	0.557
Selenium	20	564	136	20	15.15	1054	11.5	868	811	16.8	35.6
Silver	0.8	2	N/A	18.53	13.6	N/A	10.62	7.81	N/A	11.48	24.3
Toxaphene	0.78	0.21	0.0002	0.78	0.564	0.0015	0.447	0.323	0.0012	0.0018	0.0037
Tributyltin [TBT]	0.13	0.24	0.0074	0.13	0.645	0.057	0.074	0.369	0.044	0.065	0.137
2,4,5 Trichlorophenol	136	259	12	136	696	93	77.9	399	72	105	223
Zinc	54	92.7	84.2	148	478	1251	85	274	963	125	264

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	FISH ONLY									
	Criterion (µg/L)	WLAH (µg/L)	LTAH (µg/L)	Daily Avg. (µg/L)	Daily Max. (µg/L)					
Acrylonitrile	115	2637	2453	3605	7628					
Aldrin	1.147E-05	2.63E-04	2.45E-04	3.60E-04	7.61E-04					
Anthracene	1317	30203	28089	41290	87355					
Antimony	1071	24561	22842	33578	71038					
Arsenic	N/A	N/A	N/A	N/A	N/A					
Barium	N/A	N/A	N/A	N/A	N/A					
Benzene	581	13324	12391	18215	38537					
Benzidine	0.107	2.45	2.28	3.35	7.10					
Benzol(a)anthracene	0.025	0.573	0.533	0.784	1.66					
Benzol(a)pyrene	0.0025	0.057	0.053	0.078	0.166					
Bis(chloromethyl)ether	0.2745	6.30	5.85	8.61	18.2					
Bis(2-chloroethyl)ether	42.83	982	913	1343	2841					
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	173	161	237	501					
Bromodichloromethane [Dichlorobromomethane]	275	6307	5865	8622	18240					
Bromoform [Tribromomethane]	1060	24309	22607	33233	70309					
Cadmium	N/A	N/A	N/A	N/A	N/A					
Carbon Tetrachloride	46	1055	981	1442	3051					
Chlordane	0.0025	0.057	0.053	0.078	0.166					
Chlorobenzene	2737	62768	58374	85810	181543					
Chlorodibromomethane [Dibromochloromethane]	183	4197	3903	5737	12138					
Chloroform [Trichloromethane]	7697	176515	164159	241314	510535					
Chromium (hexavalent)	502	11512	10706	15739	33297					
Chrysene	2.52	57.8	53.7	79.0	167					
Cresols [Methylphenols]	9301	213300	198369	291602	616927					
Cyanide (free)	N/A	N/A	N/A	N/A	N/A					
4,4'-DDD	0.002	0.046	0.043	0.063	0.133					
4,4'-DDE	0.00013	0.0030	0.0028	0.0041	0.0086					
4,4'-DDT	0.0004	0.0092	0.0085	0.013	0.027					
2,4'-D	N/A	N/A	N/A	N/A	N/A					
Danitrol [Fenpropathrin]	473	10847	10088	14829	31374					
1,2-Dibromomethane [Ethylene Dibromide]	4.24	97	90.43	133	281					
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	13645	12690	18654	39466					
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	75656	70360	103429	218820					
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A					
3,3'-Dichlorobenzidine	2.24	51.4	47.8	70.2	149					
1,2-Dichloroethane	364	8348	7763	11412	24144					

1,1-Dichloroethylene [1,1-Dichloroethene]	55114	1263929	1175454	1727917	3655661
Dichloromethane [Methylene Chloride]	13333	305766	284362	418012	884366
1,2-Dichloropropane	259	5940	5524	8120	17179
1,3-Dichloropropene [1,3-Dichloropropylene]	119	2729	2538	3731	7893
Dicofol [Kelthane]	0.30	6.88	6.40	9.4	19.9
Dieldrin	2.0E-05	4.59E-04	4.27E-04	6.27E-04	1.33E-03
2,4-Dimethylphenol	8436	193463	179920	264483	559552
Di-n-Butyl Phthalate	92.4	2119	1971	2897	6129
Dioxins/Furans [TCDD Equivalents]	7.97E-08	1.83E-06	1.70E-06	2.50E-06	5.29E-06
Endrin	0.02	0.459	0.427	0.627	1.33
Epichlorohydrin	2013	46164	42933	63111	133520
Ethylbenzene	1867	42816	39819	58534	123836
Ethylene Glycol	1.68E+07	3.85E+08	3.58E+08	5.27E+08	1.11E+09
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.0023	0.0021	0.0031	0.0066
Heptachlor Epoxide	0.00029	0.0067	0.0062	0.0091	0.0192
Hexachlorobenzene	0.00068	0.016	0.015	0.021	0.045
Hexachlorobutadiene	0.22	5.05	4.69	6.90	14.6
Hexachlorocyclohexane (alpha)	0.0084	0.193	0.179	0.263	0.557
Hexachlorocyclohexane (beta)	0.26	5.96	5.55	8.15	17.2
Hexachlorocyclohexane (gamma) [Lindane]	0.341	7.82	7.27	10.7	22.6
Hexachlorocyclopentadiene	11.6	266	247	364	769
Hexachloroethane	2.33	53.4	49.7	73.0	155
Hexachlorophene	2.90	66.5	61.9	90.9	192
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	366515	340859	501063	1060071
Lead	3.83	243	226	333	704
Mercury	0.0250	0.573	0.533	0.784	1.66
Methoxychlor	3.0	68.8	64.0	94	199
Methyl Ethyl Ketone	9.92E+05	2.27E+07	2.12E+07	3.11E+07	6.58E+07
Methyl tert-butyl ether [MTBE]	10482	240384	223557	328628	695261
Nickel	1140	26144	24314	35741	75615
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	42953	39947	58722	124234
N-Nitrosodiethylamine	2.1	48.2	44.8	65.8	139
N-Nitroso-di-n-Butylamine	4.2	96	89.6	132	279
Pentachlorobenzene	0.355	8.14	7.57	11.1	23.5
Pentachlorophenol	0.29	6.65	6.19	9.09	19.2
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.015	0.014	0.020	0.042
Pyridine	947	21718	20197	29690	62814
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	5.50	5.12	7.52	15.9
1,1,2,2-Tetrachloroethane	26.35	604	562	826	1748
Tetrachloroethylene [Tetrachloroethene]	280	6421	5972	8778	18572
Thallium	0.23	5.27	4.91	7.21	15.3
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.252	0.235	0.345	0.730
2,4,5-TP [Silvex]	369	8462	7870	11569	24475
1,1,1-Trichloroethane	784354	1.80E+07	1.67E+07	2.46E+07	5.20E+07
1,1,2-Trichloroethane	166	3807	3540	5204	11011
Trichloroethylene [Trichloroethene]	71.9	1649	1533	2254	4769
2,4,5-Trichlorophenol	1867	42816	39819	58534	123836
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	378	352	517	1094

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life Parameter	70% of		85% of		Outfall 001	Outfall 002
	Daily Avg.	(µg/L)	Daily Avg.	(µg/L)		
Aldrin	1.77	2.15			110	110
Aluminum	584	710			4	4
Arsenic	236	287				
Cadmium	9.2	11.2				
Carbaryl	1.18	1.43				
Chlordane	0.025	0.030				
Chlorpyrifos	0.017	0.021				
Chromium (trivalent)	726	881				
Chromium (hexavalent)	9.26	11.2			5	5
Copper	8.5	10.3				
Cyanide (free)	8.9	10.8				
4,4'-DDT	0.0061	0.0075				
Demeton	0.614	0.75				
Diazinon	0.100	0.122				
Dicofol (kelthane)	35.0	42.5				
Dieldrin	0.012	0.015				
Diuron	124	150				
Endosulfan I (alpha)	0.054	0.065				
Endosulfan II (beta)	0.054	0.065				
Endosulfan sulfate	0.054	0.065				
Endrin	0.012	0.015				
Guthion [Azinphos Methyl]	0.061	0.075				
Heptachlor	0.025	0.030				
Hexachlorocyclohexane (gamma) [Lindane]	0.253	0.308				
Lead	63	76			0.4	0.4
Malathion	0.061	0.075				
Mercury	1.42	1.72				
Methoxychlor	0.184	0.224				
Mirex	0.006	0.007				
Nickel	80	98			2	2
Nonylphenol	10.4	12.7				
Parathion (ethyl)	0.038	0.047				
Pentachlorophenol	5.7	6.9				
Phenanthrene	12.2	14.8				
Polychlorinated Biphenyls [PCBs]	0.184	0.224				
Selenium	11.8	14.3				
Silver	8.03	9.76				
Toxaphene	0.0012	0.0015				
Tributyltin [TBT]	0.045	0.055				
2,4,5 Trichlorophenol	73.7	89.4			120	120
Zinc	87	106				
Human Health						
Parameter	70% of		85% of			
	Daily Avg.	(µg/L)	Daily Avg.	(µg/L)		
Acrylonitrile	2524	3065				
Aldrin	2.52E-04	3.06E-04				

Anthracene	28903	35097
Antimony	23504	28541
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	12751	15483
Benzidine	2.35	2.85
Benzo(a)anthracene	0.549	0.666
Benzo(a)pyrene	0.055	0.067
Bis(chloromethyl)ether	6.02	7.32
Bis(2-chloroethyl)ether	940	1141
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	166	201
Bromodichloromethane [Dichlorobromomethane]	6035	7328
Bromoform [Tribromomethane]	23263	28248
Cadmium	N/A	N/A
Carbon Tetrachloride	1010	1226
Chlordane	0.055	0.067
Chlorobenzene	60067	72938
Chlorodibromomethane [Dibromochloromethane]	4016	4877
Chloroform [Trichloromethane]	168920	205117
Chromium (hexavalent)	11017	13378
Chrysene	55.3	67.2
Cresols [Methylphenols]	204121	247862
Cyanide (free)	N/A	N/A
4,4'-DDD	0.044	0.053
4,4'-DDE	0.0029	0.0035
4,4'-DDT	0.0088	0.0107
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	10381	12605
1,2-Dibromoethane [Ethylene Dibromide]	93	113
m-Dichlorobenzene [1,3-Dichlorobenzene]	13058	15856
o-Dichlorobenzene [1,2-Dichlorobenzene]	72400	87915
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	49.2	59.7
1,2-Dichloroethane	7988	9700
1,1-Dichloroethylene [1,1-Dichloroethene]	1.21E+06	1.47E+06
Dichloromethane [Methylene Chloride]	292608	355310
1,2-Dichloropropane	5684	6902
1,3-Dichloropropene [1,3-Dichloropropylene]	2612	3171
Dicofol [Kelthane]	6.58	7.99
Dieldrin	4.39E-04	5.33E-04
2,4-Dimethylphenol	185138	224810
Di-n-Butyl Phthalate	2028	2462
Dioxins/Furans [TCDD Equivalents]	1.75E-06	2.12E-06
Endrin	0.439	0.533
Epichlorohydrin	44178	53644
Ethylbenzene	40974	49754
Ethylene Glycol	3.69E+08	4.48E+08
Fluoride	N/A	N/A
Heptachlor	0.0022	0.0027
Heptachlor Epoxide	0.0064	0.0077
Hexachlorobenzene	0.015	0.018
Hexachlorobutadiene	4.83	5.86
Hexachlorocyclohexane (alpha)	0.184	0.224

Hexachlorocyclohexane (<i>beta</i>)	5.71	6.93
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	7.48	9.09
Hexachlorocyclopentadiene	255	309
Hexachloroethane	51.1	62.1
Hexachlorophene	63.6	77.3
4,4'-Isopropylidenediphenol [Bisphenol A]	350744	425903
Lead	233	283
Mercury	0.549	0.666
Methoxychlor	66	80
Methyl Ethyl Ketone	2.18E+07	2.64E+07
Methyl <i>tert</i> -butyl ether [MTBE]	230040	279334
Nickel	25019	30380
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	41105	49913
N-Nitrosodiethylamine	46.1	56.0
N-Nitroso-di- <i>n</i> -Butylamine	92	112
Pentachlorobenzene	7.79	9.5
Pentachlorophenol	6.36	7.73
Polychlorinated Biphenyls [PCBs]	0.014	0.017
Pyridine	20783	25237
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	5.27	6.40
1,1,2,2-Tetrachloroethane	578	702
Tetrachloroethylene [Tetrachloroethylene]	6145	7462
Thallium	5.05	6.13
Toluene	N/A	N/A
Toxaphene	0.241	0.293
2,4,5-TP [Silvex]	8098	9833
1,1,1-Trichloroethane	1.72E+07	2.09E+07
1,1,2-Trichloroethane	3643	4424
Trichloroethylene [Trichloroethene]	1578	1916
2,4,5-Trichlorophenol	40974	49754
TTM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	362	440

[illegible]

Reasonable Potential Analyzer

Determining "Reasonable Potential" for Excursions Above Ambient Criteria Using Effluent Data Only

EPA recommends finding that a permittee has "reasonable potential" to exceed a receiving water quality standard if it cannot be demonstrated with a high confidence level that the upper bound of the lognormal distribution of effluent concentrations is below the receiving water criteria at specified low-flow conditions.

Step 1 Determine the number of total observations ("n") for a particular set of effluent data (concentration or toxic units [TUs]), and determine the highest value from that data set.

Step 2 Determine the coefficient of variation for the data set. For a data set where $n < 10$, the coefficient of variation (CV) is estimated to equal 0.6, or the CV is calculated from data obtained from a discharger. For a data set where $n > 0$, the CV is calculate as standard deviation/mean. For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

Step 3 Determine the appropriate ratio from the table below.

Step 4 Multiply the highest value from a data set by the value from the table below. Use this value with the appropriate dilution to project a maximum receiving water concentration (RWC).

Step 5 Compare the projected maximum RWC to the applicable standard (criteria maximum concentration, criteria continuous concentration [CCC], or reference ambient concentration). EPA recommends that permitting authorities find reasonable potential when the projected RWC is greater than an ambient criterion.

